

# **Oracle A Solution for E-business Advantages and Disadvantages**

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**Introduction:**

E- business is best described as the use of Internet technologies as the basis for almost all business activity not just a way to sell products and services on the World Wide Web. The Internet has essentially transformed the way we conduct business, as well as, a new model for conducting business transactions with customers. E-business is the way information is exchanged, customers are serviced, marketing of products, and transactions are made.

Companies of all sizes are fueling the growth of E-business. Business to business commerce is one of the top five initiatives at board levels at every size company. Any business that wants to expand their services and products will need to establish themselves on the Internet. The benefits of the Internet have turned from idea to reality overnight. Businesses have discovered a direct way to reach new and existing customers. Businesses now know that succeeding in E-business requires more than an attractive web site. Many companies are available to help with this effort. A good analogy of this is a quote from the vice President of server marketing at Oracle “ If you look at the gold rush of the 19<sup>th</sup> Century, you will find that those people who made money are the ones who provided the picks and shovels.” “ We want to provide the picks and shovels to the E-commerce gold rush.” <sup>i</sup>

From a Software Engineering point of view, is Oracle where businesses should buy their picks and shovels? Does Oracle provide the tools that will be needed to solve the E-business requirements for the future?

**Advantages:**

Oracle’s experience spans twenty years. They provide a wide range of products and services, including their industry-leading object oriented database. The introduction of the new Oracle8i with many enhancements to their database technology makes Oracle the choice of

nearly three-quarters of the Fortune 500 companies. Their services include, development tools, internet-enabled business applications for customer relationship management, manufacturing, supply chain, finance, and human resources. Other services are consulting, education, and support services. These services and products gives Oracle a tremendous advantage when it comes to a software engineers choice of case tools when planning an E-commerce system.

Business goals have not changed over the years. Businesses are trying to expand markets, improve efficiencies and retain customers for repeat business. To retain customers, deliver value and grow the business, systems need be in place to efficiently handle the operational aspects. Oracle believes that Internet technologies are the simplest and least expensive way to reach these goals. Gone are the days of expensive technology experts that install and maintain the personal computers of an organization. The use of Internet technology allows for everyone in an organization to find crucial information for better decision making at all levels.

Oracle is the first software company that has developed its entire suite of products to be Internet-enabled. Oracle believes in open standards for their software products. This means that the software is not restricted. If a company is using Oracle software it can use the best technology available in terms of hardware. Oracle software will run on personal digital assistants, set top devices, personal computers, workstations, minicomputers, mainframes and massively parallel computers. When it comes to system engineering, this portability of Oracle software becomes very advantageous.

The explosive growth of the Internet has provided businesses with the ability to advertise and sell products to millions of potential customers worldwide. Oracle has announced that more than sixty companies have purchased Oracle (R) Strategic Procurement. They also announced an

E-business Advanced Planning and Scheduling (APS) suite that is expected to offer next day return on investment. These new products, along with the other product offerings, show that Oracle is a leader in supplying solutions for E-business. Many fortune 500 companies are striving to consolidate and standardize company software and hardware. Oracles ability to serve a multitude of business needs using one software package will meet many companies' objectives in standardizing software systems. With Oracles canny ways of staying ahead of competition, by providing a multitude of products and services, makes them a first choice for most businesses moving toward the Internet and E-commerce.

**Disadvantage:**

When system engineers are considering E-business, many factors must be considered. The factors include network abilities, customer/supplier connections and competition. It does not matter how good the software suites are if the network does not support them. In today's environment, businesses are required to secure their networks from hackers or security violators by placing firewalls, secure domains, encryption boards, routers, and front end processors. These many roadblocks deter from efficient processing and create bottlenecks on the network.

When considering Oracle for an E-business system, software engineers have to evaluate the network capabilities. The operating systems ability to interface with the Oracle database server through routers and any firewalls the company might put between the user and the server. If the company does not have the proper hardware or the servers are already bottlenecked then the investment to added E-business will be much higher.

As a software engineer during the analysis and design phase of the system the workability of the network is very important. An engineer needs to analyze the system for efficiency of the network to limit the number of bottlenecks. Downtime of the network is another problem that

must be examined. Downtime can cost a company a lot of money in lost revenue from their E-business customers.

There are millions of customers that do not have access via the Internet to use E-commerce. Other customers are unwilling to disclose personal information over the Internet. This is a big disadvantage if a company does not analyze their customer base. Levi-Strauss did not evaluate their customer base and the use of E-commerce. Recently, they shut off their E-business of selling Levi's and Dockers. The customers buying Levi's were not using their E-business and it was costing the company too much money to maintain it. Levi's solution is to let the retailers such as JC Penny's and Wal-Mart market their products through their web sites.

When designing an E-business system, the engineer must understand the type of business that will be using it. If a company offers stock trades then transaction time must be very quick. Companies selling products must consider packaging and shipping as a high priority of their E-business. Taking the time to understand the customers wants and needs is crucial in the design of the system or it can cause negative effects such as losing customers or high maintenance costs.

Currently, there is high demand from business to incorporate E-business systems. The competition for Oracle is very big. Many companies are entering the market with creative marketing software packages. Harbinger Corp. is offering application outsourcing. The Application Service Provider (APS) market is projected to grow to 22.2 billion by 2003. This innovative idea of offering software, connectivity, and support services on a subscription basis should help businesses to improve the bottom line in terms of E-business. As a software engineer designing an E-business system solution all innovative tools must be examined. Another company with new technology and innovative tools is DMW Worldwide. This

company is touting ENTERO Market Support Direct and Indirect sales channels and employee touch points. As quoted by the CEO, “The ENTERO software suite fills a gap in the market by providing a fully-integrated solution for optimizing customer, sales channel and employee touch points.”<sup>ii</sup> ENTERO is built on DMW Worldwides’ innovative, patent-pending Digital Knowledge Plant (DKP) software framework. Its architecture is object-oriented and fully integrated to the component level. It’s innovation like this that a software engineer needs to be aware of when designing E-business solutions.

Another company with innovative thoughts is Cordada. This company has developed a first of its kind private network, which supports economic research and collaboration among Pacific Rim nations.<sup>iii</sup> Cordada uses commercial software packages such as Lotus Domino, which is the interactive web server that integrates Lotus Notes. Companies like Cordada, which choose commercial products to solve E-business problems, are going to be the most competitive for companies like Oracle. This will help businesses add E-business without additional expense toward office suites. Software engineers can look for the most reasonable E-business solution at an economic price.

### **Conclusion:**

When designing a system, the engineer needs to show the benefit of the system verses the cost. Management will expect the engineers to evaluate the advantages, disadvantages and ROI (return on investments) when designing the solutions. Consideration of time implementation, network, mainframe and compatibility of existing software is required by the engineer while developing a solution to E-business.

Oracle with its release of Oracle8i is on the cutting edge of technology. If the Internet is the way of future business it should remain the leader in database technology. Oracle is going to

have to stay innovative with new ideas to maintain its dominance. With competition like Cordada , DMW Worldwide and Harbinger Corp. looking to take the market share, Oracle will have to please their current customers and will need to market for new business.

Oracle as well as its competition will need to assure that their products support software engineers and business needs. The software engineer will look for: 1). The ease of design to code translation. This is how close the software language looks like the design. 2). Compiler efficiency, and language need optimizing compilers. 3). Source code portability. The code needs to be able to change platforms with little or no modifications. 4). Availability of development tools, such as, a suite of tools that include debugging, formatting, editing, and compiling etc. 5). Maintainability using easy design to code translations through proper documentation.<sup>iv</sup>

Oracle's E-business solution offers a comprehensive suite of enterprise applications. A platform to build applications and professional services that can help to formulate a design to implement an E-business solution. Oracle is the only solution provider to offer a complete end to end solution.

Choosing a suite of products for an E-business solution should be analyzed carefully for the business needs and capital investment opportunities. When using a life cycle theory, an analyst can identify the advantages and disadvantages of the software suites offered by several companies. This allows the analyst to best meet a company's ROI.

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End Notes:

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<sup>ii</sup> DMW Worldwide [www.dmwgroup.com](http://www.dmwgroup.com) May 25, 1999

<sup>iii</sup> Cordada Group [www.cordada.com](http://www.cordada.com) Oct. 24 1999

<sup>iv</sup> Software Engineering A Practitioner's Approach Pressman pg. 518